[0036] Layers of adhesive that may lie between the various layers, and electrical connections to the camera chips **9***c* are not shown in the figures.

[0037] The through holes **6** in the sunshade plate **1** comprise side walls **7**, typically conical shaped, which are tapered with an angle of 20-40°, preferably 25-35° with respect to the normal direction of the sunshade plate **1** or its top surface **11**. The exact angle is determined according to camera specifications and usually is about 2° more than the camera's field of view. Alternatively, the side walls may be vertical or may be tapered in the other direction, i.e. opening up towards the bottom. In other embodiments of the invention, the side walls are not straight, but rounded or chamfered.

[0038] The thickness of the sunshade plate **1** is in the range of 0.1 to 0.5 or 1 millimeters, the width of the top opening of the through hole **6** being ca. 1 to 3 or 5 millimeters, and the width of the bottom opening being e.g. around 0.3 millimeters.

[0039] The sunshade plate **1** is preferably made of an optically intransparent material. The manufacturing process for the sunshade plate **1** itself may be molding, stamping, or another replication process. As material, preferably a plastic material such as a thermoplast or an epoxy, with or without filler material, is used.

[0040] The method for manufacturing a wafer stack comprises the steps of stacking the wafers and spacers constituting the wafer stack, including the sunshade plate **1** and optionally the cover plate **5**. The method for manufacturing an individual optical element comprises the further step of dicing the wafer stack **8**, separating it into a plurality of integrated camera devices **10**. Corresponding dicing lines **13** are shown in the FIGS. **2** and **3**. FIGS. **4** and **5** show lateral cut-away views of integrated camera modules generated by this separating step.

[0041] While the invention has been described in present preferred embodiments of the invention, it is distinctly understood that the invention is not limited thereto, but may be otherwise variously embodied and practised within the scope of the claims.

LIST OF DESIGNATIONS

[0042] **1** sunshade plate
[0043] **2** top wafer
[0044] **3** spacer wafer
[0045] **4** further wafer
[0046] **5** cover plate
[0047] **6** through hole, aperture hole
[0048] **7** side wall
[0049] **8** wafer stack
[0050] **9***a* first lens
[0051] **9***b* second lens
[0052] **9***c* camera chip
[0053] **10** integrated camera device
[0054] **11** top surface
[0055] **12** bottom surface
[0056] **13** dicing lines
[0057] **14** optical axe

1. A method for fabricating an integrated optical device comprising the steps of:

creating a wafer stack by stacking at least a top wafer carrying as functional elements a plurality of lenses, on at least one further wafer comprising further functional elements,

separating the wafer stack into a plurality of integrated optical devices, wherein corresponding functional elements of the top and further wafer are aligned with each other and define a plurality of main optical axes, each axis corresponding to one integrated optical device, and

providing a sunshade plate as part of an integrated optical device by:

providing a sunshade plate comprising a plurality of through holes, the through holes being arranged to correspond to the arrangement of the functional elements on the top wafer; and

stacking the sunshade plate on the top wafer, with the through holes being aligned with said main optical axes.

2. The method of claim **1**, comprising the further step of stacking a transparent cover plate on the sunshade plate prior to separating the wafer stack into individual optical devices.

3. A wafer stack for the fabrication of integrated optical devices, the wafer stack comprising:

at least a top wafer carrying as functional elements a plurality of lenses,

at least one further wafer comprising further functional elements, the top wafer being stacked on the further wafer,

wherein corresponding functional elements of the top and further wafer are aligned with each other and define a plurality of main optical axes, and

wherein the wafer stack further comprises a sunshade plate comprising a plurality of through holes, the sunshade plate being stacked on the top wafer, with the through holes being arranged with said main optical axes.

4. The wafer stack of claim **3**, further comprising a transparent cover plate stacked on the sunshade plate.

5. The wafer stack of claim **3**, wherein the sides of the through holes are tapered and have an angle between 20-40° with respect to the normal of the sunshade plate.

6. The wafer stack of claim **3**, wherein the thickness of the sunshade plate is in the range of 0.1 to 1 millimeters.

7. The wafer stack of claim **3**, wherein the sunshade plate is made of an optically intransparent material.

8. An integrated optical device, manufactured from a wafer stack according to claim **3** by separating said wafer stack into a plurality of integrated optical devices.

9. A sunshade plate for an integrated optical device, for use in the method of claim **1**, wherein the sunshade plate comprises a plurality of through holes.

10. The wafer stack of claim **4**, wherein the sides of the through holes are tapered and have an angle between 20-40° with respect to the normal of the sunshade plate.

11. The wafer stack of claim **4**, wherein the thickness of the sunshade plate is in the range of 0.1 to 1 millimeters.

12. The wafer stack of claim **5**, wherein the thickness of the sunshade plate is in the range of 0.1 to 1 millimeters.

13. The wafer stack of claim **4**, wherein the sunshade plate is made of an optically intransparent material.

14. The wafer stack of claim **5**, wherein the sunshade plate is made of an optically intransparent material.

15. The wafer stack of claim **6**, wherein the sunshade plate is made of an optically intransparent material.

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